

IN THE DRAWINGS

The attached sheet of drawings includes changes to Fig. 1. This sheet, which includes Fig. 1, replaces the original sheet including Fig. 1.

Attachment: Replacement Sheet

REMARKS/ARGUMENTS

Favorable reconsideration of this application, in light of the following discussion, is respectfully requested.

Claims 11-20 are presently active, and Claims 11-20 are amended by the present amendment. Support for non-cosmetic changes to the claims may be found in the specification on page 30, lines 9-24, and Figures 7 and 12-15. Thus, no new matter is added.

The outstanding Official Action objected to Claims 11-20; Claims 11-17 and 20 were rejected under 35 U.S.C. § 102(b) as unpatentable over the publication “Automated Performance Modeling from Scenarios and SDL designs of Distributed Systems” to El-Sayed et al. (hereinafter “El-Sayed”); and Claims 18 and 19 were rejected under 35 U.S.C. § 103(a) as unpatentable over El-Sayed in view of U.S. Patent No. 6,324,496 to Alur et al. (hereinafter “Alur”).

The Official Action has indicated the IDS, filed October 13, 2004, is not in compliance with 37 C.F.R. '1.98. In this regard, Applicants respectfully direct the Examiner’s attention to MPEP '609, which states:

Where the information listed is not in the English language, but was cited in a search report or other action by foreign patent office in a counterpart foreign application, the requirement for a concise explanation of relevance can be satisfied by submitting an English-language version of the search report or action which indicates the degree of relevance found by the foreign office. This may be an explanation of which portion of the reference is particularly relevant, to which claims it applies, or merely and “X”, “Y”, or “A” indication on a search report.<sup>1</sup>

Applicants note that a corresponding search report was filed along with the IDS of October 13, 2004 indicating the relevance of the listed reference as either “X”, “Y”, “A.”

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<sup>1</sup> MPEP '609, page 600-129.

Therefore, Applicants have complied with their duty of disclosure under 37 C.F.R. § 1.98 and MPEP § 609<sup>2</sup>. Accordingly, Applicants respectfully submit that the references cited in the IDS of October 13, 2004 are required to be considered and request indication of such in the next communication.

Figure 1 is amended to provide descriptive labels for boxes 2, 4, and 6. Support for the amendment to the figure may be found on page 25, line 14 to page 29, line 15. Thus, no new matter is added.

The outstanding Official Action objected to the word “it” in line 11 of Claim 11 as indefinite. In reply to the objection, Claim 11 is amended to recite formalizing the execution flows using a notation “allowing identification of” causal relationships between different software entities of the system.

The outstanding Official Action objected to Claims 11, 15, and 18 with regard to the claimed term “the execution flows” and “the request groups.” Applicants acknowledge with appreciation the suggestions provided in the Official Action. However, Applicants respectfully submit that the system includes a plurality of request groups, and an execution flow is associated with each request group. Therefore, Applicants respectfully submit that the claim terms “the execution flows” and “the request groups” in Claims 11, 15, and 18 have proper antecedent basis, and therefore are definite.

The outstanding Official Action objected to Claims 12-20 with regard to the claim terms “a process”. In reply to the objections, Claims 12-20 are amended to recite “The process”.

In view of the amendments to the claims, Applicants respectfully request that the objections to Claims 11-20 be withdrawn.

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<sup>2</sup> Furthermore, it is believed that the USPTO provides translation services for Examiners if the Examiner believes that a certain reference may be pertinent and not adequately described in the statement of relevance. Applicants encourage the Examiner to use these translation services consistent with examination guidelines.

Rejections under 35 U.S.C. § 102(b)

The outstanding Official Action rejected Claims 11-20 under 35 U.S.C. § 102(b) as unpatentable over El-Sayed. Applicants respectfully traverse the rejection.

Claim 11 is directed to a process for generating a performance model from a functional model for a system including a plurality of distributed hardware and software entities that engage to provide a service to at least one user. The process includes distributing representative system requests in a finite number of groups and identifying, for each request group, a corresponding execution flow. The process further includes formalizing the execution flows using a notation allowing identification of *information quantifying the system's resource consumption*. Additionally, the process involves creating a performance model from an intermediate model that includes formalized execution flows, a resource specification that specifies physical hardware of the system, and an environment specification quantifying the amount of requests generated by one or more users.

El-Sayed describes a performance model building process that takes an MSC model and generates a layered queuing network (LQN) performance model.<sup>3</sup> More specifically, El-Sayed describes taking an SDL specification including execution traces.<sup>4</sup> El-Sayed identifies messages from the traces, different services provided by each process in the trace, and finds the precedence relationships between activities in each service.<sup>5</sup> Finally, El-Sayed maps the software architecture into an LQN model.<sup>6</sup>

The Official Action asserts that Chapter 3 and Figures 1-5 of El-Sayed describes *formalizing the execution flows*. Applicants respectfully submit that while Chapter 3 of El-Sayed describes modeling system performance using layered queuing networks (LQN)

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<sup>3</sup> See El-Sayed at the Abstract.

<sup>4</sup> See El-Sayed at page 130.

<sup>5</sup> See El-Sayed, chapter 4.

<sup>6</sup> See El-Sayed at pages 132-133.

performance models, Chapter 3 of El-Sayed does not disclose or suggest *formalizing the execution flows*.

Claim 11 is distinguishable over El-Sayed, as the applied reference fails to disclose formalizing the execution flows *using a notation allowing identification of information quantifying the system's resource consumption*. El-Sayed merely describes using a Message Sequence Chart (MSC) that illustrates different processes, messages passed between the processes, and *computational activities* that each process executes.<sup>7</sup> The computational activities depicted in MSC models of El-Sayed are not information *quantifying the system's resource consumption* because the computational activity only indicates that a computation is taking place. El-Sayed neither discloses nor suggests that the computational activity provides information indicating how much of the system's resource is being consumed.

Additionally, although El-Sayed describes that the information on resource functions is introduced at the last step of building the performance model,<sup>8</sup> El-Sayed does not disclose or suggest that the information on the resource functions is used in *formalizing the execution flows using a notation allowing identification of information quantifying the system's resource consumption*. Thus, El-Sayed does not use a notation allowing identification of information quantifying the system's resource consumption.

Therefore, Applicants respectfully submit that El-Sayed does not disclose all the claimed limitations of Claim 11. Applicants respectfully request that the rejection of Claim 11, and claims depending therefrom, under 35 U.S.C. § 102(b) be withdrawn.

Rejections under 35 U.S.C. § 103(a)

The outstanding Official Action rejected Claims 18 and 19 under 35 U.S.C. § 103(a) as unpatentable over El-Sayed in view of Alur. Applicants respectfully traverse the rejection.

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<sup>7</sup> See El-Sayed, Figures 4-7.

<sup>8</sup> See El-Sayed, at chapter 5 and Figure 1.

As outlined above, El-Sayed does not disclose all of the elements of amended Claim 11, which Claims 18 and 19 depend from. As Alur does not remedy the deficiency discussed above, Applicants' respectfully submit that a *prima facie* case of obviousness has not been presented.

Accordingly, Applicants respectfully request that the rejection of Claims 18 and 19 under 35 USC § 103(a) be withdrawn.

Consequently, in view of the present amendment and response, no further issues are believed to be outstanding in the present application, and the present application is believed to be in condition for formal allowance. A Notice of Allowance for Claims 11-20 is earnestly solicited.

Respectfully submitted,

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MAIER & NEUSTADT, P.C.

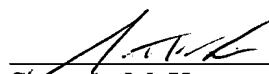
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